

INITIAL STATEMENT OF REASONS
PROPOSED AMENDMENTS TO APPLIANCE EFFICIENCY REGULATIONS

**CALIFORNIA CODE OF REGULATIONS,
TITLE 20, SECTIONS 1601 THROUGH 1607**

**CALIFORNIA ENERGY COMMISSION
Docket Number 09-AAER-1C
September 18, 2009**

INTRODUCTION

Existing law (Public Resources Code section 25402(c)) requires the California Energy Commission (Energy Commission) to adopt regulations that prescribe minimum efficiency levels for appliances. The Energy Commission first adopted appliance efficiency regulations in 1976 and has periodically revised them since then. The current regulations include provisions on testing of appliances to determine their efficiency, reporting of data by manufacturers to the Energy Commission, standards establishing mandatory efficiency levels, and compliance and enforcement procedures, as well as general provisions on the scope of the regulations and definitions.

In the rulemaking proceeding of this Initial Statement of Reasons (ISOR) and Notice of Proposed Action (NOPA), the Energy Commission is proposing to adopt new efficiency standards for televisions no later than November 4, 2009. The proposed standards include regulations addressing power consumption in active mode, standby mode, power factor, luminance control, labeling, and power consumption in televisions with a screen area less than 3,000 square inches in size and to adopt the IEC 62087 Ed 2 test procedure for testing televisions in active mode that is published by International Electrotechnical Commission (IEC) and has been adopted by the ENERGY STAR[®] program. The proposed Tier 1 standards will become effective January 1, 2011 for television sets of sizes fewer than or equal to 1,400 square inches, and the proposed Tier 2 standards for those same size television sets shall become effective January 1, 2013. The Energy Commission may subsequently begin a Phase 2 of this rulemaking that may include the adoption of new efficiency standards for televisions in excess of 1,400 square inches.

SPECIFIC PURPOSE, RATIONALE, AND NECESSITY OF EACH PROPOSED ADOPTION, AMENDMENT, AND REPEAL

The California economy, and the well-being of all of California's citizens, depends on an adequate, reasonably-priced, and environmentally-sound supply of energy. Recent growth in electricity demand has strained the reliability of California's electricity system and has in some circumstances contributed to a substantial rise in electricity prices.

Improvements in energy efficiency are the cheapest and most environmentally-friendly

methods to help bring demand and supply into balance. Existing law (Public Resources Code section 25402(c)) requires the Energy Commission to adopt standards that prescribe minimum efficiency levels for appliances.

The following sections are directly affected by the proposed standards:

Section 1601. Scope

Section 1601(v) is being amended to “Televisions with a screen area not greater than 1,400 square inches, and consumer audio and video equipment”. The specific purpose and rationale is to emphasize televisions as a separate appliance and to define the scope of television sizes the proposed to be regulated. This is necessary to differentiate the appliance as a separate product from consumer audio and video. This will also make clear that this initial phase of the television standards rulemaking shall apply only to televisions not greater than 1,400 square inches, so that a subsequent Phase 2 of this rulemaking may include the adoption of efficiency standards for televisions in excess of 1,400 square inches.

Section 1602. Definitions

Section 1602(v) Consumer Audio and Video Equipment is being amended to “Televisions, and consumer audio and video equipment”. The specific purpose and rationale is to emphasize television as a separate appliance which is necessary to differentiate the appliance as a separate product from consumer audio and video.

“Aspect ratio” is being added for the specific purpose and rationale of describing the proportions of a television which is necessary for correct reporting of the appliance efficiency data.

“Automatic Brightness Control” is being added for the specific purpose and rationale of describing the parameters for a television to be considered as having this type of control which is necessary for correct testing and reporting of the appliance efficiency data.

“Color Television Set” is being deleted for the specific purpose and rationale of eliminating an unused definition from the regulations. This is necessary to maintain clear language and to avoid the confusion of unnecessary definitions.

“Combination TV” is being added for the specific purpose and rationale of defining one type of television that is regulated which is necessary to define the scope of the term “Television (TV)”

“Component TV” is being added for the specific purpose and rationale of defining one type of television that is regulated which is necessary to define the scope of the term “Television (TV)”

“Computer Monitor” is being added for the specific purpose and rationale of defining one type of product that is not a television which is necessary to define the scope of the term “Television (TV)”

“Download Acquisition Mode (DAM)” or “Standby-Active mode” is being added for the specific purpose and rationale of defining a particular type of standby mode for televisions which is necessary to differentiate from the measured passive-standby mode.

“Forced Menu” is being added for the specific purpose and rationale of defining a television setup menu which is a component of the proposed regulations to ensure that televisions are tested and operated at the most appropriate brightness setting.

“Integrated occupancy sensor” is being added for the specific purpose and rationale of defining the energy saving presence sensor for televisions which is necessary to properly define the data reporting requirements of section 1606.

“Native Vertical Resolution” is being added for the specific purpose and rationale of defining the resolution capabilities of televisions which is necessary to properly define the data reporting requirements of section 1606.

“Monochrome Television Set” is being deleted for the specific purpose and rationale of eliminating an unused definition from the regulations. This is necessary to maintain clear language and to avoid the confusion of unnecessary definitions.

“On Mode” and “Active Mode” is being added for the specific purpose and rationale of defining a mode of operation of televisions which is necessary for testing and regulating the efficiency of that mode.

“Retail on mode power” is being added for the specific purpose and rationale of defining a mode of operation of televisions which is necessary for testing and reporting the efficiency of that mode.

“Screen size” is being added for the specific purpose and rationale of defining the standard measurement of television size which is necessary to properly define the data reporting requirements of section 1606.

“Selected input mode” is being added for the specific purpose and rationale of defining the mode of operation selected by a user at any given time. These modes range from input 1, input 2, television etc. This definition is necessary for the prescriptive standard which requires televisions to automatically enter standby mode after a maximum of 15 minutes without audio or video signal in the selected input mode.

“Television (TV)” is being amended for the specific purpose and rationale of updating the definition to ensure that the scope of the regulations is consistent with the current available televisions in the consumer market. This is necessary to insure the regulated

community understands the scope of coverage of the proposed efficiency standards.

“Television (TV) set” is being deleted for the specific purpose and rationale of replacing the definition with “Television (TV).” This is necessary to maintain consistency with other portions of the regulations and to use a more appropriately define the scope of the regulations.

“Television Monitor” is being added for the specific purpose and rationale of defining one type of television that is regulated by the efficiency standards which is necessary to ensure the regulated community understands the scope of coverage of the proposed efficiency standards for Televisions.

“Television standby-passive mode” is being amended to replace the word “vision” with picture for the specific purpose and rationale that a television does not produce visions and instead produces pictures. This is necessary to appropriately describe the operation of televisions.

“Viewable Screen Area” is being added for the specific purpose and rationale of describing the parameters for a television which is necessary for correct testing and reporting of the appliance.

Section 1604. Test Method for Specific Appliances

Section 1604(v) is being amended for the specific purpose and rationale of better defining the scope of testing. This is necessary to ensure that the correct and different test methods are used to measure standby passive mode energy consumption of televisions and consumer audio and video equipment.

Section 1604(v)(2) is being added to add a new test method for standby-passive power based on the International Electrotechnical Commission: “(IEC) 62301, Edition 1.0 – “Household Electrical Appliances - Measurement of Standby Power.” The specific purpose and rationale is to change the test procedure of televisions in the standby-passive mode which is necessary to align the testing procedures with those used by other agencies, specifically the U.S Environmental Protection Agency’s ENERGY STAR[®] program.

Section 1604(v)(3) is being added to add a new test method for active mode power and power factor based on the International Electrotechnical Commission: “(IEC) 62087, Edition 2.0 – “Methods of Measurement for the Power Consumption of Audio, Video, and Related Equipment.” The specific purpose and rationale is to require the measurement of televisions in the active mode which is necessary to comply with the new active mode and power factor efficiency standards.

Section 1604(v)(3)(A), Section 1604(v)(3)(B), and Section 1604(v)(3)(C) are being added to include methodologies for measuring power factor and power for televisions with automatic brightness controls and forced menus. The specific purpose for measuring power factor is to regulate its level in televisions. This is necessary for

increasing energy efficiency and power quality because high power factors decrease distribution system energy losses and equipment costs. The specific purpose for measuring power for automatic brightness controls and forced menus is to ensure the energy efficiency standard will be met when the consumer operates the television at home. This is necessary because the automatic brightness controls and forced menus are part of the basis for the energy savings of the efficiency standard and will be the operating mode of some televisions within a consumer's home.

These amendments are necessary to ensure that television test results more accurately reflect the true power consumption of the product.

Section 1604(v)(3)(D) is being added for the specific purpose and rationale of providing a test methodology for measuring the luminance of television screens in home and retail modes. This testing is necessary to meet the requirement in 1605.3(v)(3)(C).

IEC 62087:2008(E), Edition 2.0 and IEC 62301:2005 are being added as documents incorporated by reference for the specific purpose and rationale of referencing documents and their governing organization which is necessary to incorporate their use into the proposed regulations.

Section 1605.3 State Standards for Non-Federally Regulated Appliances

Section 1605.3(v)(1) Consumer Audio and Video Equipment is being amended for the specific purpose and rationale of eliminating televisions from Table V-1 of this section and updating the table to reflect that televisions are now covered in Table V-2. This is necessary to properly segregate televisions from consumer audio and video equipment as they will be subject to different regulations.

Section 1605.3(v)(2) Televisions is being added as a separate standard for the specific purpose and rationale of separating televisions from consumer audio and video products. This is necessary to maintain clear standards for televisions.

Section 1605.3(v)(3) is being added for the specific purpose and rationale of defining the scope of the design standards for televisions. This is necessary to adopt clear regulations.

Section 1605.3(v)(3)(A) is being added to require the television to enter a standby-passive mode or standby-active mode after 15-minutes without a signal. The specific purpose and rationale for this prescriptive requirement is to have a mechanism for the televisions to turn off under specific conditions. This is necessary to reduce television energy consumption and meet the mandates of the proposed efficiency standards.

Section 1605.3(v)(3)(B) is being added to require televisions to enter standby-passive mode when the power button is pressed. The specific purpose and rationale of defining this prescriptive requirement for televisions is to ensure that televisions enter a low

power mode under specified conditions. This is necessary to reduce television energy consumption and meet the mandates of the proposed efficiency standards.

Section 1605.3(v)(3)(C) is being added to require a maximum luminance differential between a television's home mode and maximum consumptive mode for televisions with a forced menu. The specific purpose and rationale is to prevent testing, and certification as compliant, televisions in a mode which would not be acceptable to a consumer. This is necessary to ensure that the estimated energy savings are achieved and not reduced by specific manufacturing and marketing practices.

Section 1605.3(v) Table V-2 is being added to place the required standards for power factor, passive-standby mode and active mode for the specific purpose and rationale of placing these standards in one easy to read table which is necessary for clear regulations.

Section 1605.3(v) Table V-2 includes a new standard for power factor for televisions which consume more than 100W. The purpose and rationale is to reduce energy loss and costs in electrical distribution. This is necessary to improve the power quality of televisions and to specify the exact requirements of the mandates of the proposed efficiency standards.

Section 1605.3(v) Table V-2 includes an amended standard for passive standby mode standard. The purpose and rationale is to reduce energy consumption in standby mode. This is necessary to reduce electrical demand in California, to meet the mandates of proposed efficiency standards, and to harmonize the standard with federal and international efforts.

Section 1605.3(v) Table V-2 includes two new standards for active mode with different effective dates. The purpose and rationale is to limit the active mode power consumption of televisions to allow only more efficient televisions to be sold in California. This is necessary to reduce electrical demand in California as well as to specify the exact requirements of the mandates of the proposed efficiency standards.

Section 1606: Filing by Manufacturers; Listing of Appliances in Database

Table X, Data Submittal Requirements, Appliance "V" is being amended to add "Televisions" as a separate data submittal requirement. The specific purpose and rationale of collecting data is necessary to show compliance with the efficiency standards in section 1605.3(v). In addition the depth dimension of televisions is being added as a voluntary data submittal for the specific purpose and rationale of providing consumers with valuable information while evaluating television products.

Section 1606(4)(A)(5)(j) is being added to require that the television has been properly labeled as required by section 1607(d)(11) of the regulations. The specific purpose and rationale is to require manufacturers to report that they have met the labeling requirements which are a necessary component of the enforcement of the regulations.

Section 1606(4)(A)(5)(k) is being added to require that the television has been properly labeled as required by section 1607(d)(11) of the regulations. The specific purpose and rationale is to require manufacturers to report that they have met the labeling requirements which are a necessary component of the enforcement of the regulations.

Section 1607. Marking of Appliances

Section 1607(d)(11) Televisions is being added to require labeling of televisions. The purpose and rationale is to provide consumers with the relevant information about the energy efficiency of the television. This is necessary to provide the consumers of California with energy disclosures and potential operation costs for the televisions they buy.

REASONS FOR MANDATING SPECIFIC ACTIONS, PROCEDURES, TECHNOLOGIES, OR EQUIPMENT; CONSIDERATION OF PERFORMANCE STANDARDS

The proposed standard for televisions requires the following: (1) televisions enter standby passive mode or standby-active mode after 15 minutes without audio or video signal and, (2) a television must enter passive standby mode when turned off by remote or integrated button/switch. The reasons for mandating the automatic shutoff requirement is to save energy when the television is not performing its primary task which is to provide visual and auditory output. This is not possible to do using a performance standard because it would require a test method that depends on devices that are external to the television and therefore outside the scope of the regulation. The second mandated standard is supplemental to the standby-passive power performance standard to ensure that televisions are capable of entering a low consumption mode when turned off. A performance standard already exists in this case, and the prescriptive standard is primarily designed to close a loophole. Both of these standards are proposed with the purpose and rationale of saving energy on a statewide basis and to benefit the consumers of televisions in the State of California.

STUDIES, REPORTS, AND DOCUMENTS RELIED UPON

Energy Commission Staff Report, 2008 Appliance Efficiency Rulemaking, Phase I, Part C, December 2008, CEC-400-2008-028-SD

Pat Eilert, Gary Fernstrom, Ed Elliot, "Pacific Gas and Electric's (PG&E) CASE Study April 2, 2008" and "PG &E's CASE Study July 3, 2008."

Noah Horowitz, Natural Resources Defense Council, Suzanne Foster, Ecos Consulting. Opportunities for Energy Savings, <http://www.nrdc.org/air/energy/energyeff/stb.pdf>

Peter May-Ostendorp, TV Power Consumption Sensitivity Analysis Memo
http://www.isf-europe.com/Articles/ECOS_ISF_TV_Power_Consumption_Sensitivity_Analysis_Memo.pdf

Michael Petricone, "The Consumer Electronics Association (CEA) Alternative to Pacific Gas and Electric Company's (PG&E's) proposal to set energy use limits for televisions."

REASONABLE ALTERNATIVES, IF ANY, TO THE PROPOSED AMENDMENTS THAT WERE CONSIDERED, INCLUDING ALTERNATIVES TO LESSEN IMPACTS ON SMALL BUSINESS, AND REASONS FOR REJECTING THEM

The staff of the Energy Commission investigated as an alternative to the proposed efficiency standards the energy savings expected from relying only on the U.S. EPA's voluntary ENERGY STAR® Program for television. As a result of that investigation staff has determined that the voluntary ENERGY STAR® program would only obtain 35 percent the calculated \$8.1 billion in energy efficiency for the consumer that was calculated for the proposed efficiency standards.

The Energy Commission is proposing new minimum efficiency standards for televisions. The proposed standards are feasible and cost effective and no equivalent or alternatives were found to lessen impacts on small businesses. Small businesses that purchase televisions subject to these efficiency standards are not expected to see increased purchase costs for those appliances and are expected to see reductions in electricity. The Energy Commission is not aware of any cost impacts that a business would necessarily incur in reasonable compliance with the proposed action. The basis for this determination is supported by the findings in the document titled "*Energy Commission Staff Report, 2009 Appliance Efficiency Rulemaking, Phase I, Part C, CEC-400-2009-024.*"

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE RELIED UPON TO SUPPORT THE INITIAL DETERMINATION, IN THE NOTICE OF PROPOSED ACTION THAT THE REGULATION WILL NOT HAVE A SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESSES

The basis for this determination is supported by the findings in the document titled "*Energy Commission Staff Report, 2009 Appliance Efficiency Rulemaking, Phase I, Part C, CEC-400-2009-024.*"

EFFORTS TO AVOID UNNECESSARY DUPLICATION OR CONFLICT WITH THE CODE OF FEDERAL REGULATIONS

The proposed regulations do not duplicate existing federal regulations. However, the proposed regulation to require the testing of television energy use may conflict with an existing and outdated 1978 federal test method located in 10 C.F.R. Pt. 430, Subpart B, Appendix H to resolve this potential conflict, the Energy Commission petitioned the U.S. Department of Energy to repeal this outdated test method.